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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/680,319

10/06/2003

Tai-Cheng Yu

5458

25859

7590

09/20/2005

WEI TE CHUNG
FOXCONN INTERNATIONAL, INC.
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EXAMINER

KIM, RICHARD H

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/680,319

Applicant(s)

CHENG

Examiner

Richard H. Kim

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(Signature)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faris et al. (US 6,801,270 B2) in view of Allen et al. (US 6,919,946 B2).

Referring to claims 1, 3 and 13, Faris et al. discloses a liquid crystal display comprising a liquid crystal display panel having a reflective polarizing element (80); and a backlight module having a light source (71), a light guide plate (72), and a reflector (14"); the light source being disposed adjacent to the light guide plate and the reflector (71), wherein the liquid crystal panel is located on the backlight module (123). Faris et al. further discloses that the LCD may include a quarter-wave plate (col. 6, line 34). However, the reference does not explicitly disclose a quarter-wave plate, wherein the quarter-wave plate and the light guide plate are stacked together in order, and the reflective polarizing element of the liquid crystal panel faces toward and is adjacent to the quarter-wave plate of the backlight module, wherein the quarter wave plate is attached to an upper surface of the light guide plate.

Allen et al. discloses that a reflective polarizer can incorporate a quarter wave plate (col. 6, line 6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the reflective polarizing element of the liquid crystal panel face

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toward and is adjacent to the quarter-wave plate of the backlight module since Faris et al. discloses that it is desirable to employ a quarter wave plate (col. 6, lines 34). Furthermore, Allen et al. discloses that incorporating a quarter-wave plate would enable one to convert circularly polarized light to linearly polarized light, thereby only allowing only desirable polarization through. Furthermore, situating the quarter wave plate to be adjacent to the reflective polarizer and wherein the quarter wave plate is attached to an upper surface of the light guide plate would have been obvious since Allen discloses that the reflective polarizer would incorporate the quarter wave plate (col. 6, lines 5-7). Therefore, having them adjacent to each other and wherein the quarter wave plate is attached to the upper surface of the light guide plate would be obvious to allow minimal interference between plates.

Referring to claim 2, Faris et al. discloses that the reflector is at the bottom surface of the light guide plate (14").

Referring to claim 4, Faris et al. discloses that a diffuser is disposed within the LCD but does not disclose that the diffuser is disposed between the liquid crystal panel and the quarter wave plate.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to situate the diffuser between the liquid crystal panel and the quarter wave plate since the function of the diffuser is independent of its arrangement in the liquid crystal. Therefore, placing the diffuser between the liquid crystal panel and the quarter-wave plate would be functionally equivalent.

Referring to claim 5, Fair et al. and Allen et al. disclose the device previously recited, but fails to disclose a brightness enhancing film.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a brightness enhancing film since brightness enhancing film are well known in the art to enhance the brightness of the liquid crystal display device.

Referring to claim 14, Faris et al. and Allen et al. disclose the method previously recited, but fails to disclose the method wherein in a light a p-polarization component is reflected by the reflective polarizing element, and passes the quarter-wave plate twice and the reflector once, thus resulting in a conversion of "a p-polarization component to clockwise circular polarization component to a counter clockwise polarization component to an s-polarization component" before the reflected and reformed p-polarization component hits the reflective polarizing element again (Fig. 1). Since structurally, Hansen and Motomura et al. discloses the claimed subject matter, the light would therefore act in the same manner as described.

3. Claims 6, 7, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faris et al. and Allen et al. in view of Wang et al. (US 5,982,464).

Faris et al. and Allen et al. disclose the device previously recited, but fails to disclose that the quarter-wave plate is made of polyvinyl alcohol or mica.

Wang et al. discloses a quarter-wave plate made of mica (col. 4, lines 40-41).

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the quarter-wave plate to be made of mica since mica is well known in the art as an effective quarter-wave plate material due to its refractive index and transparent properties. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made for the quarter-wave plate to be made of polyvinyl alcohol since

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applicant has claimed multiple embodiments of the material in which the quarter wave plate is made. Therefore, it is evident that the material to make the quarter-wave plate is not a critical limitation.

Response to Arguments

4. Applicant's arguments with respect to claims 1-7, 13-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H. Kim whose telephone number is (571)272-2294. The examiner can normally be reached on 9:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard H Kim
Examiner
Art Unit 2871

RHK



DUNG T. NGUYEN
PRIMARY EXAMINER